

October 01, 2018



U.S. Department  
of Transportation

East Building, PHH-30  
1200 New Jersey Avenue S.E.  
Washington, D.C. 20590

**Pipeline and Hazardous  
Materials Safety Administration**

DOT-SP 20653  
(FIRST REVISION)

**EXPIRATION DATE: 2022-07-31**

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Taurus DES, LLC  
Milwaukee, WI
2. PURPOSE AND LIMITATION:
  - a. This special permit authorizes the transportation in commerce of lithium ion batteries in alternative packaging. This special permit provides no relief from the Hazardous Materials Regulations (HMR) or the International Maritime Dangerous Goods (IMDG) Code other than as specifically stated herein. The most recent revision supersedes all previous revisions.
  - b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.
  - c. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
  - d. This special permit serves as a "competent authority approval" in accordance with 7.9.2 of the IMDG Code and as defined under 49 CFR § 107.1.
  - e. No party status will be granted to this special permit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.

Tracking Number: 2018059849

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4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 173.185(b) in that alternative packaging is authorized.
5. BASIS: This special permit is based on the application of Johnson Controls, Inc. dated April 26, 2018 and supplemental information dated June 20, 2018 submitted in accordance with § 107.105 and the public proceeding thereon and additional information dated September 4, 2018.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identi- fication Number	Packing Group
Lithium ion batteries <i>including lithium ion polymer batteries</i>	9	UN3480	N/A
Lithium ion batteries packed with equipment <i>including lithium ion polymer batteries</i>	9	UN3481	N/A

7. SAFETY CONTROL MEASURES:

a. OPERATIONAL CONTROLS:

(1) Battery modules identified as JH3-2P, JH3-3P, JH4-2P, JH4-3P, JH4-4P, and JP3-2P consisting of the number of cells and the nominal energy contents ranging from 6.524 to 14.896 kWh as specified in the April 26, 2018 application and on file with the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD).

(2) The cells are identified as JH3, JH4, and JP3 as appropriate.

(3) The modules in a rack must not be electrically connected during shipment.

(4) The assembly of modules (battery assembly) in a rack must have the total energy content ranging from 100 kWh to 3.0 MWh.

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(5) The battery modules must be equipped with an effective means of preventing dangerous reverse current flow when cells or modules are connected in parallel.

(5) The battery assembly must be equipped with a battery management system that has been verified as preventing overcharge, short circuits and over-discharge between the modules.

(6) Battery terminals must have protective covering to prevent short-circuiting.

(7) All battery modules will be shipped with a state of charge of 30% or less.

(8) There will be no electrical connection from the interior to the exterior of the container while in transport.

b. TESTING: All three (3) cell types and six (6) battery module types as identified in the application dated April 26, 2018 and supplemental information dated June 20, 2018 and on file with the OHMSAPD must have passed the required tests in accordance with the UN Manual of Tests and Criteria, 5<sup>th</sup> or 6<sup>th</sup> Revised Edition, as indicated in the test reports.

c. PACKAGING:

(1) Lithium ion batteries.

(i) Packaging consists of lithium ion battery modules mounted in racks inside of ISO (10', 20', or 30' in length) or custom-made (7' in length) metal/steel outer containers.

(ii) Each rack shall consist of either 14 or 17 battery modules.

(iii) Battery modules must be securely fastened to racks.

(iv) Each rack shall be securely attached to the interior structure of the outer container in such a manner as to prevent significant movement relative to the container under conditions including shocks, loadings, and vibrations normally incident to transport.

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(v) Each outer container must contain between 1 and 27 racks.

(2) Lithium ion batteries packed with equipment.

(i) The outer container not filled with racks to its full capacity may be packed with items containing nonhazardous material such as converters and controllers as listed in the June 20, 2018 supplemental submission.

(ii) The racks and the non-lithium battery items must be securely attached to the interior of the outer container to prevent movement.

(iii) The custom-made outer container may only contain one (1) rack and be packed with equipment.

d. MARKING: Each package prepared under the provisions of this approval must be plainly marked with the Special Permit number "DOT-SP 20653."

8. SPECIAL PROVISIONS:

a. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package or its contents and it is reoffered for transportation in conformance with this special permit and the HMR.

b. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel, or motor vehicle used to transport packages covered by this special permit.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

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- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for William Schoonover  
Associate Administrator for Hazardous Materials Safety

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Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at [http://hazmat.dot.gov/sp\\_app/special\\_permits/spec\\_perm\\_index.htm](http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm). Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Steve H/Kenny Herzog